Trippe Systems Incorporated

Suite 1100

120 Montgomery Street

San Francisco, California 94104

415-781-2022

Software Subsidiary of
Trippe Manufacturing Company, Incorporated

Sep 71

*Mini simulation prog.
for 370 —
supposedly for
my mini.*

Develops minicomputer programs a new way

Minicomputers, low in cost and small in size, are proving to be optimum devices for a great many applications. These varied uses, in turn, give rise to the need for many programs. But these are not readily available, and so the purchaser must usually prepare his own.

Developing and testing a minicomputer program on the device itself is a difficult task at best, and may be virtually impossible—particularly if the minicomputer has a small core, and few if any peripherals. Even under the best of circumstances it takes a great deal of time, and this in turn increases costs and delays final installation.

There is a way, however, to develop superior programs more quickly, and thus at far less cost, by not using the minicomputer but by preparing the programs on a large computer. And these programs, in machine language, will be fully operational and ready to load into the minicomputer. This approach is called **Mini-Sim**.

Advantages

Cuts Programming Time

Provides 360* peripherals to minicomputer programmers

Allows maintenance of software for the mini with 360 utility programs, or minicomputer utility programs addressing 360 peripherals

Offers program checkout aids that are not available with the mini hardware

Cuts Hardware Costs

Delays delivery of your minicomputer until most of the software is developed

Eliminates mini peripherals needed for programming but not for the ultimate application

Reduces Risks

Allows off-line program development and checkout when the mini is used to control an expensive process

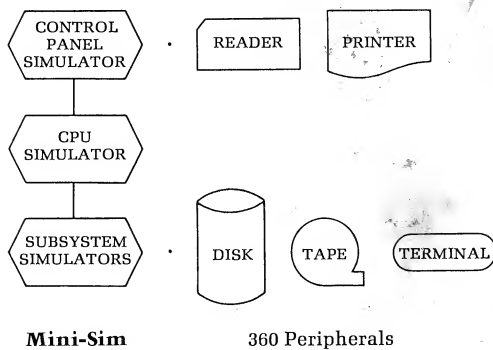Accumulates performance statistics that determine the proper selection of hardware to adequately meet application requirements

*The IBM System/360

Technology

Operation

Mini–Sim is a BAL program that executes in a 360 computer. The program interprets the same binary machine code that is executed by the mini. The program contains the software equivalent of the mini CPU and peripheral-device logic.

This diagram shows the major **Mini–Sim** components and how they relate to 360 peripherals.

```
 _____                _____     _____
/ CONTROL \             |        |   |        |
| PANEL    | .          | READER |   | PRINTER |
\SIMULATOR/             |_____|   |_____|
    |
 _____
/  CPU   \
\SIMULATOR/
    |
 _____               __         __        _____
/SUBSYSTEM \  .          |  |       (    )     (          )
|SIMULATORS|             |DISK|     ( TAPE )   ( TERMINAL )
_____/             |__|        \__/       _____/
```

Mini-Sim   360 Peripherals

The control panel simulator provides the equivalent of hands-on access to the mini switches and indicators that are used for start-up and optional operating modes.

The CPU simulator contains the logic to decode and execute mini instructions.

Subsystem simulators make 360 peripherals appear to the mini software to be mini peripherals. **Mini–Sim** options include simulation of overlapped input-output with precise timing relationships maintained.

Mini–Sim operates in batch mode. JCL or DOS control cards are read to assign the appropriate peripherals and to start the simulator. Simulator control statements are read to obtain a bootstrap and to begin execution.

The bootstrap in simulated main memory is executed by the simulator to load a loader. The loader is executed by the simulator to load an application program. The application program, a mini assembler for example, is executed by the simulator.

Each time the application program terminates, the control-panel file is read to obtain the next control statement. The simulator is terminated when the end of the control-statement file is reached.

As many 360 peripherals as necessary can be assigned to provide simulation of the minicomputer input-output activities. (Real-time simulation of input-output is optional.)

Mini–Sim 360 memory requirements are 16K bytes plus buffers and simulated memory.

Is a complete package

Mini-Sim for a specified mini on a reel of 7- or 9-track tape

Source code for **Mini-Sim**

Operating manual that describes simulator control language and files needed for operation.

Installation manual that suggests JCL or DOS control cards to be used and peripheral assignments necessary for optional **Mini-Sim** functions

Subsystem simulators that are optionally available for most common types of peripheral device, including communications terminals

An optional checkout system for trapping, tracing, and other execution-time controls

A guarantee that **Mini-Sim** will simulate the specified minicomputer on the purchaser's 360

Consulting, on an optional basis, is available as required

Purchase price

The basic package (CPU and control panel) starts at $3,750.

Available options include the following:

Standard Peripherals

 Console typewriter
 Card reader
 Printer
 Magnetic tape drive
 Magnetic disk
 Magnetic tape cassette
 Magnetic drum

Special Peripherals

 Industrial process
 Computers
 Communication terminals
 CRT terminals

Special checkout feature

Presentation

We would like to offer you a quotation on a
Mini-Sim package that will meet your specific
requirements, and at no obligation.

Phone or write,
or use the enclosed reply envelope.